Mitogenic Activity
of CTGF and CTGF Domains
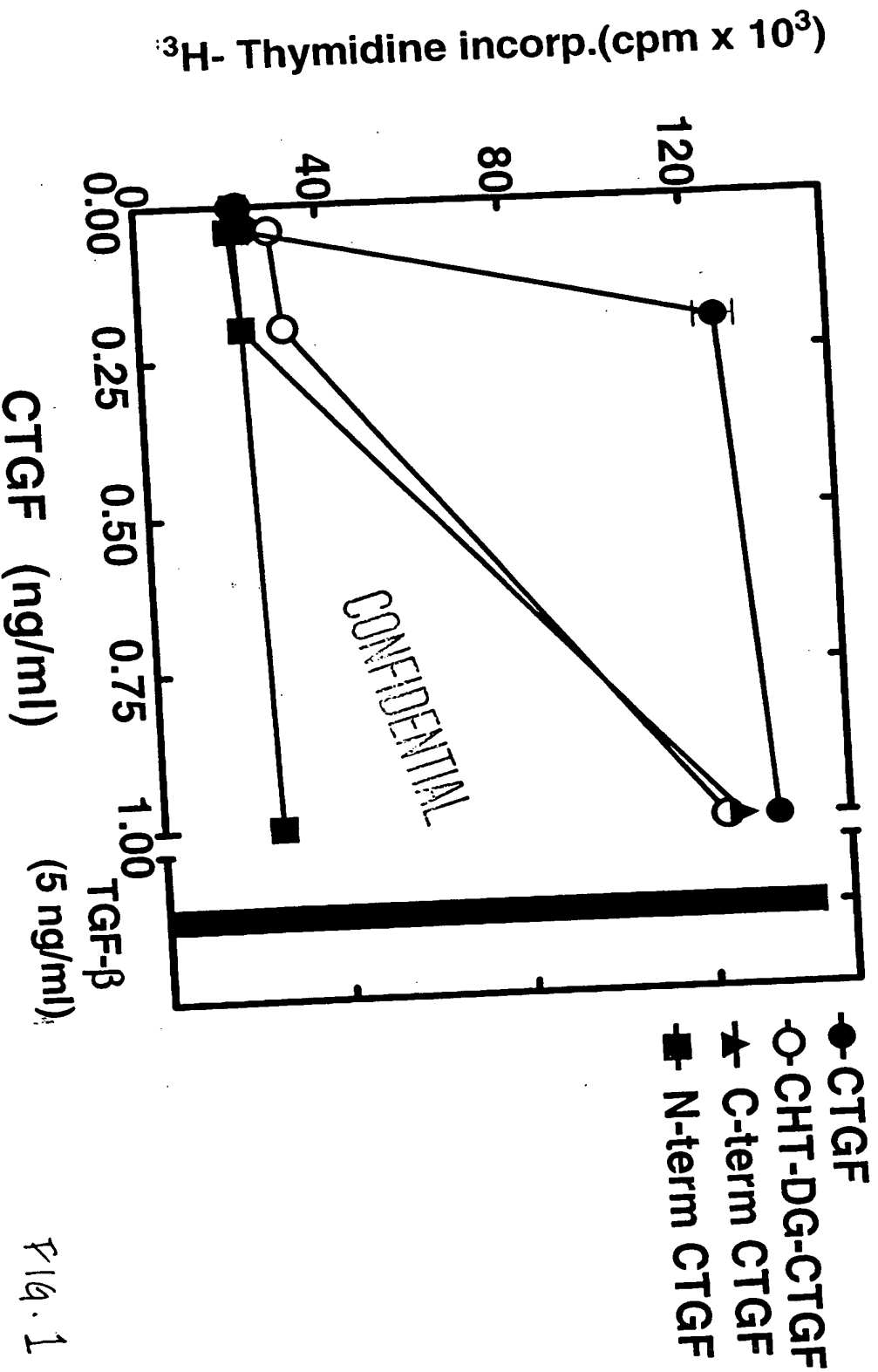

Y-axis: ^3H- Thymidine incorp.(cpm x 10^3)

X-axis: CTGF (ng/ml)

Legend:
- ● CTGF
- ○ CHT-DG-CTGF
- ✶ C-term CTGF
- ■ N-term CTGF

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TGF-β (5 ng/ml)

Fig. 1

Figure 2A

cccggccgacagccccgagacgacagcccggcgcgtcccggtccccacctccgaccaccgcca
gcgctccaggccccgcgctccccgctcgccgccaccgcgccctccgctccgcccgcagtgcca
accATGACCGCCGCCAGTATGGGCCCCGTCCGCGTCGCCTTCGTGGTCCTCCTC
     M T A A S M G P V R V A F V V L L

GCCCTCTGCAGCCGGCCGGCCGTCGGCCAGAACTGCAGCGGGCCGTGCCGGTGCCCGGAC
 A L C S R P A V G Q N C S G P C R C P D
              |-> exon 2

GAGCCGGCGCCGCGCTGCCCGGCGGGCGTGAGCCTCGTGCTGGACGGCTGCGGCTGCTGC
 E P A P R C P A G V S L V L D G C G C C

CGCGTCTGCGCCAAGCAGCTGGGCGAGCTGTGCACCGAGCGCGACCCCTGCGACCCGCAC
 R V C A K Q L G E L C T E R D P C D P H

AAGGGCCTCTTCTGTGACTTCGGCTCCCCGGCCAACCGCAAGATCGGCGTGTGCACCGCC
 K G L F C D F G S P A N R K I G V C T A
                                                      |->

AAAGATGGTGCTCCCTGCATCTTCGGTGGTACGGTGTACCGCAGCGGAGAGTCCTTCCAG
 K D G A P C I F G G T V Y R S G E S F Q
 exon 3

AGCAGCTGCAAGTACCAGTGCACGTGCCTGGACGGGGCGGTGGGCTGCATGCCCCTGTGC
 S S C K Y Q C T C L D G A V G C M P L C

AGCATGGACGTTCGTCTGCCCAGCCCTGACTGCCCCTTCCCGAGGAGGGTCAAGCTGCCC
 S M D V R L P S P D C P F P R R V K L P

GGGAAATGCTGCGAGGAGTGGGTGTGTGACGAGCCCAAGGACCAAACCGTGGTTGGGCCT
 G K C C E E W V C D E P K D Q T V V G P

GCCCTCGCGGCTTACCGACTGGAAGACACGTTTGGCCCAGACCCAACTATGATTAGAGCC
 A L A A Y R L E D T F G P D P T M I R A
              |-> exon 4

AACTGCCTGGTCCAGACCACAGAGTGGAGCGCCTGTTCCAAGACCTGTGGGATGGGCATC
 N C L V Q T T E W S A C S K T C G M G I

TCCACCCGGGTTACCAATGACAACGCCTCCTGCAGGCTAGAGAAGCAGAGCCGCCTGTGC
 S T R V T N D N A S C R L E K Q S R L C

Figure 2B

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ATGGTCAGGCCTTGCGAAGCTGACCTGGAAGAGAACATTAAGAAGGGCAAAAAGTGCATC
 M  V  R  P  C  E  A  D  L  E  E  N  I  K  K  G  K  K  C  I
                                             |-> exon 5

CGTACTCCCAAAATCTCCAAGCCTATCAAGTTTGAGCTTTCTGGCTGCACCAGCATGAAG
 R  T  P  K  I  S  K  P  I  K  F  E  L  S  G  C  T  S  M  K

ACATACCGAGCTAAATTCTGTGGAGTATGTACCGACGGCCGATGCTGCACCCCCCACAGA
 T  Y  R  A  K  F  C  G  V  C  T  D  G  R  C  C  T  P  H  R

ACCACCACCCTGCCGGTGGAGTTCAAGTGCCCTGACGGCGAGGTCATGAAGAAGAACATG
 T  T  T  L  P  V  E  F  K  C  P  D  G  E  V  M  K  K  N  M

ATGTTCATCAAGACCTGTGCCTGCCATTACAACTGTCCCGGAGACAATGACATCTTTGAA
 M  F  I  K  T  C  A  C  H  Y  N  C  P  G  D  N  D  I  F  E

TCGCTGTACTACAGGAAGATGTACGGAGACATGGCATGAagccagagagtgagagacatt
 S  L  Y  Y  R  K  M  Y  G  D  M  A  *
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aactcattagactggaacttgaactgattcacatctcattttttccgtaaaaatgatttcagta
gcacaagttatttaaatctgttttttctaactggggggaaaagattcccacccaattcaaaacat
tgtgccatgtcaaacaaatagtctatcttccccagacactggtttgaagaatgttaagacttg
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ggaggcatcagtgtcttggcaggctgatttctaggtaggaaatgtggtagctcacg
```

FIGURE 3

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GCCCTCGCGGCTTACCGACTGGAAGACACGTTTGGCCCAGACCCAACTATGATTAGAGCC
 A   L   A   A   Y   R   L   E   D   T   F   G   P   D   P   T   M   I   R   A
         |->   exon 4


AACTGCCTGGTCCAGACCACAGAGTGGAGCGCCTGTTCCAAGACCTGTGGGATGGGCATC
 N   C   L   V   Q   T   T   E   W   S   A   C   S   K   T   C   G   M   G   I


TCCACCCGGGTTACCAATGACAACGCCTCCTGCAGGCTAGAGAAGCAGAGCCGCCTGTGC
 S   T   R   V   T   N   D   N   A   S   C   R   L   E   K   Q   S   R   L   C


ATGGTCAGGCCTTGCGAAGCTGACCTGGAAGAGAACATTAAGAAGGGCAAAAAGTGCATC
 M   V   R   P   C   E   A   D   L   E   E   N   I   K   K   G   K   K   C   I
                                             |->   exon 5


CGTACTCCCAAAATCTCCAAGCCTATCAAGTTTGAGCTTTCTGGCTGCACCAGCATGAAG
 R   T   P   K   I   S   K   P   I   K   F   E   L   S   G   C   T   S   M   K


ACATACCGAGCTAAATTCTGTGGAGTATGTACCGACGGCCGATGCTGCACCCCCCACAGA
 T   Y   R   A   K   F   C   G   V   C   T   D   G   R   C   C   T   P   H   R


ACCACCACCCTGCCGGTGGAGTTCAAGTGCCCTGACGGCGAGGTCATGAAGAAGAACATG
 T   T   T   L   P   V   E   F   K   C   P   D   G   E   V   M   K   K   N   M


ATGTTCATCAAGACCTGTGCCTGCCATTACAACTGTCCCGGAGACAATGACATCTTTGAA
 M   F   I   K   T   C   A   C   H   Y   N   C   P   G   D   N   D   I   F   E


TCGCTGTACTACAGGAAGATGTACGGAGACATGGCATGAagccagagagtgagagacatt
 S   L   Y   Y   R   K   M   Y   G   D   M   A   *
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aactcattagactggaacttgaactgattcacatctcattttttccgtaaaaatgatttcagta
gcacaagttatttaaatctgtttttctaactggggggaaaagattcccacccaattcaaaacat
tgtgccatgtcaaacaaatagtctatcttccccagacactggtttgaagaatgttaagacttg
acagtggaactacattagtacacagcaccagaatgtatattaaggtgtggctttaggagcagt
gggagggtaccggcccggttagtatcatcagatcgactcttatacgagtaatatgcctgctat
ttgaagtgtaattgagaaggaaaattttagcgtgctcactgacctgcctgtagccccagtgac
agctaggatgtgcattctccagccatcaagagactgagtcaagttgttccttaagtcagaaca
gcagactcagctctgacattctgattcgaatgacactgttcaggaatcggaatcctgtcgatt
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aatttaaagttgtttgtgcctttttattttttgttttttaatgctttgatatttcaatgttagcc
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tacttatatggaaattctgctcagatagaatgacagtccgtcaaaacagattgtttgcaaagg
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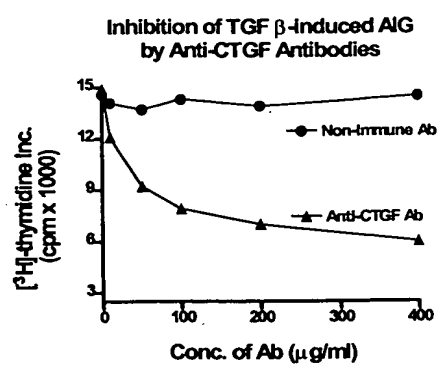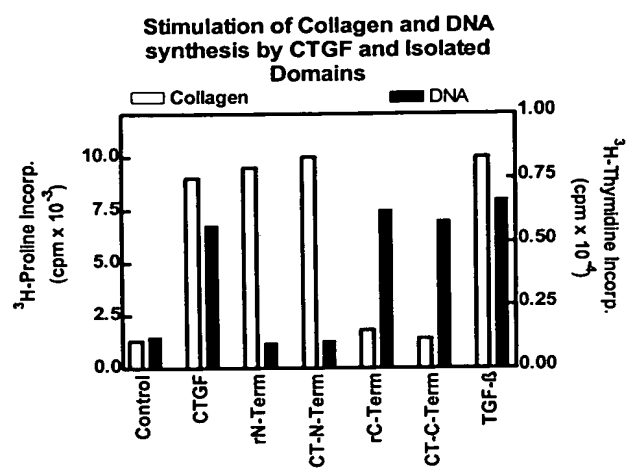
Figure 4

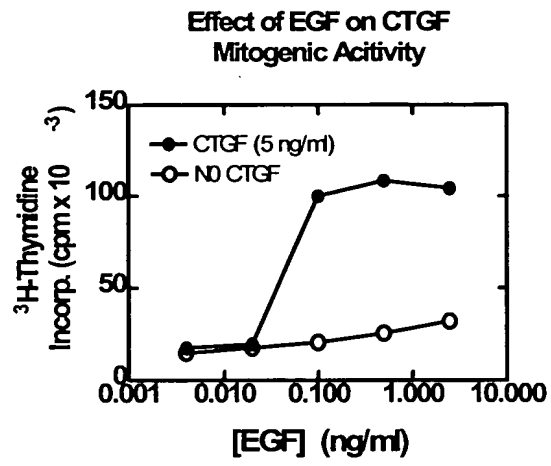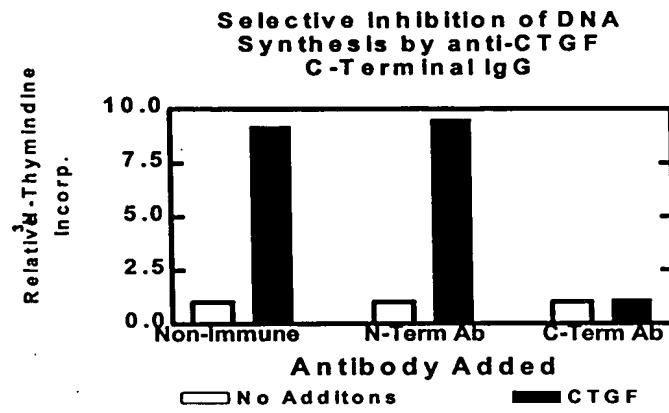Inhibition of TGF β-Induced AIG
by Anti-CTGF Antibodies

Figure 5

Stimulation of Collagen and DNA synthesis by CTGF and Isolated Domains

Figure 6

**Effect of EGF on CTGF
Mitogenic Acitivity**

[EGF] (ng/ml)

FIGURE 7

Selective Inhibition of DNA
Synthesis by anti-CTGF
C-Terminal IgG